

CLAIMS

1. A control circuit of a power supply delivering a supply current to an inductor connected in series with a horizontal deflection yoke of a cathode ray tube display for displaying pictures comprised of successive lines, said inductor being the primary coil of a low/high transformer operatively connected for delivering a rectified
5 low-pass filtered biasing voltage to the anode of the display, said low-pass filtering having a first time constant corresponding to the duration of a small number of pictures, said control circuit comprising:

feedback means for generating a monitoring voltage substantially proportional to said biasing voltage and for controlling said supply current so as to keep said monitoring
10 voltage equal to a reference voltage; and

feedforward means for measuring the cathode current supplied to the cathode of the display and for adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said
15 first time constant.

2. A control circuit according to claim 1, wherein said monitoring voltage is provided by a sensing coil of the transformer, operatively connected through a rectifier diode and a first voltage divider to an integrator, the output of said integrator supplying
20 an output control signal of the control circuit.

3. A control circuit according to claim 2, wherein the input and output of said integrator are respectively the inverting input and output of an operational amplifier, connected through a capacitor, the non inverting input of the operational amplifier
25 receiving said reference voltage.

4. A control circuit according to claim 3, wherein said feedforward means comprise at least a second voltage divider provided for receiving the variations of the cathode voltage, the output of said second voltage divider being connected through a
30 resistor to the anode of a diode, the cathode of said diode being connected to a

predetermined threshold voltage; and the output of said second voltage divider being operatively connected through a capacitor to the input of said integrator.

5 5. A control apparatus of a cathode ray tube display for displaying pictures comprised of successive lines, comprising:

power supply means provided for supplying a supply current to an inductor connected in series with a horizontal deflection yoke of the display;

10 biasing means comprising a low/high transformer, the primary coil of said transformer being said inductor, for delivering a rectified low-pass filtered biasing voltage to the anode of the display, said low-pass filtering having a first time constant corresponding to the duration of a plurality of pictures;

feedback means for generating a monitoring voltage substantially proportional to said biasing voltage and for controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

15 feedforward means for measuring the cathode current supplied to the cathode of the display and for adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.

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6. A control apparatus according to claim 5, wherein said monitoring voltage is provided by a sensing coil of the transformer, operatively connected through a rectifier diode and a first voltage divider to an integrator, the output of said integrator supplying an output control signal of the control circuit.

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7. A control apparatus according to claim 6, wherein the input and output of said integrator are respectively the inverting input and output of an operational amplifier, connected through a capacitor, the non inverting input of the operational amplifier receiving said reference voltage.

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8. A control apparatus according to claim 7, wherein said feedforward means comprises at least a second voltage divider provided for receiving the variations of the cathode voltage, the output of said second voltage divider being connected through a resistor to the anode of a diode, the cathode of said diode being connected to a predetermined threshold voltage; and the output of said second voltage divider being
5 operatively connected through a capacitor to the input of said integrator.

9. A CRT display, the control apparatus of which comprises a control circuit according to claim 1.
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10. A CRT display comprising a control apparatus according to claim 5.

11. A control process of a power supply provided for delivering a supply current to an inductor connected in series with a horizontal deflection yoke of a cathode ray tube display for displaying pictures comprised of successive lines, said inductor
15 being the primary coil of a low/high transformer operatively connected for delivering a rectified low-pass filtered biasing voltage to the anode of the display, said low-pass filtering having a first time constant corresponding to the duration of a plurality of pictures, said control circuit comprising the following steps:

20 generating a monitoring voltage substantially proportional to said biasing voltage and controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

measuring the cathode current supplied to the cathode of the display and adding to said monitoring voltage a compensation voltage corresponding to said cathode current,
25 low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.